

APPEAL BRIEF  
DOCKET NO. 10010060-5

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPELLANT:	Ganapathiappan et al.	<p align="center"><b><u>CERTIFICATE OF MAILING</u></b> <b><u>UNDER 37 C.F.R. § 1.8</u></b></p> <p>DATE OF DEPOSIT: February 9, 2006</p> <p>I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being deposited with the United States Postal Service under 37 C.F.R. § 1.8 on the date indicated above and is addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313.</p> <p><i>Brenda Wiseman</i> <b>Brenda Wiseman</b></p>
SERIAL NO:	10/698,607	
FILED:	October 30, 2003	
FOR:	AMPHIPATHIC POLYMER PARTICLES AND METHODS OF MANUFACTURING THE SAME	
ART UNIT:	1713	
EXAMINER:	Helen Lee Pezzuto	
DOCKET NO.:	10010060-5	

**APPELLANTS' APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Mail Stop Appeal Brief – Patents

Dear Sir:

Appellants submit this appeal brief in connection with their appeal from the final rejection of the Patent Office, mailed September 9, 2005, in the above-identified application. A Notice of Appeal was filed on December 9, 2005.

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I. REAL PARTY IN INTEREST

The real party in interest of this application is Hewlett-Packard Company or Hewlett-Packard Development Company, P.O. Box 272400, Fort Collins, Colorado, 80527-2400.

## II. RELATED APPEALS AND INTERFERENCES

Appellants and Appellants' legal representatives know of no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### III. STATUS OF CLAIMS

Claims 6-10 and 24 remain pending. Claims 1-5 and 11-23 have been canceled.

The claims on appeal in this application are claims 6-10 and 24, which constitute all of the claims presently pending in the application.

#### IV. STATUS OF AMENDMENTS

No amendments to pending claims 6-10 and 24 have been made since the office action mailed on September 9, 2005, which was the final rejection of the pending claims.

V. SUMMARY OF INVENTION (INDEPENDENT CLAIM 6)

6. (Amended) A method of preparing amphipathic polymer particles (page 16, line 18) comprising the steps of:

admixing an aqueous carrier, an unsaturated monomer containing a hydrophobic moiety, an unsaturated monomer containing a convertible moiety in hydrophobic form, and a surfactant to form an emulsion; (page 16, lines 19-21)

initiating a polymerization by adding a catalyst to the emulsion, (page 16, line 22)

continuing polymerization at a temperature and for a period of time sufficient to form amphipathic polymer particles, (page 16, lines 23-24)

wherein the amphipathic polymer particles have a size range of 50-500 nm. (page 16, line 25)

In summary, the invention claimed in independent claim 6 provides a method of preparing amphipathic polymer particles (particles with both hydrophobic and hydrophilic regions) by introducing convertible monomers into an emulsion in hydrophobic form, and then polymerizing the particles. The convertible monomers in hydrophobic form can then be converted to hydrophilic anionic salts by adjusting the pH of the solution to a basic range.

VI. ISSUES PRESENTED FOR REVIEW

1. 35 U.S.C. § 102

Whether claims 6, 9-10 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by US Pat. No. 5,942,560 to Idogawa et al. (hereinafter “Idogawa”).

2. 35 U.S.C. § 103

Whether claims 7-8 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Idogawa in view of US Pat. No. 4,795,794 to Winnik et al. (hereinafter “Winnik”).

Whether claim 24 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Idogawa.

## VII. ARGUMENT

### A. Brief History of Prosecution

The present application was filed on October 30, 2003, as U.S. Patent Application Serial No. 10/698,607, for AMPHIPATHIC POLYMER PARTICLES AND METHODS OF MANUFACTURING THE SAME. The present application was filed as a divisional of copending application number 09/956,431, filed on September 20, 2001, and incorporated by reference. As filed in the divisional application, claims 1-5 and 11-23 were canceled, while claims 6-10 remained pending.

In the first Office Action mailed September 2, 2004, claims 6 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by US Pat. No. 5,990,202 to Nguyen et al. (hereinafter “Nguyen”). Claims 6, 9, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by US Pat. No. 6,090,193 to Nigam et al. (hereinafter “Nigam”). Claims 6-10 were rejected under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as being anticipated by, or in the alternative, as obvious over US Pat. No. 4,795,794 to Winnik et al. (hereinafter “Winnik”).

Appellant submitted a response to the first Office Action, received by the Patent Office on December 6, 2004. In the response, Appellant amended claim 6 to read “an unsaturated monomer containing a convertible moiety in hydrophobic form . . .” Appellant also added new claim 24, which reads “The method of claim 6, further comprising the step of converting the convertible moiety to a hydrophilic form after the amphipathic polymer particles are formed.” Appellant argued that the cited patents did not disclose each and every element of the pending claims. First, Appellant explained that Nguyen failed to teach or suggest preparing amphipathic polymeric particles by combining a hydrophobic monomer with a convertible monomer in

hydrophobic form. Next, Appellant made clear that Nigam did not utilize an emulsion process incorporating a catalyst to produce the claimed particles, nor did Nigen teach the inclusion of a convertible monomer in hydrophobic form. Finally, Appellant explained that Winnik did not mention the use of a surfactant, nor was there any mention of utilizing a convertible monomer in hydrophobic form. The Appellant also argued that claim 6 was not *prima facie* obvious in view of Winnik because Winnik did not teach or suggest using surfactants or convertible monomers in their hydrophobic form during particle formation.

A second Office Action was issued and made final on March 2, 2005. In that action, the Examiner dropped the Nguyen and Nigen references, but still rejected all pending claims. The Examiner rejected claims 6, 9, and 10 as anticipated by Idogawa under 35 U.S.C. § 102(b). The Examiner rejected claim 24 under 35 U.S.C. 103(a) as being unpatentable over Idogawa. Finally, the Examiner combined Idogawa and Winnik to reject claims 7 and 8 under 35 U.S.C. § 103(a).

Appellant submitted a response to the second Office Action along with a Request for Continued Examination (RCE), which the Patent Office received on June 13, 2004. In the response, Appellant argued that Idogawa did not contain every element of the present invention because Idogawa “explicitly states that the vinyl monomers having acid functional groups are added as hydrophilic moieties to improve the emulsion.” Addressing the Examiner’s contention that both Idogawa and the present invention use the compound 2-methacryloyloxyethyl succinate to form an emulsion for polymerization, Appellant explained that Idogawa teaches the addition of the compound “as a hydrophilic moiety to improve the admixture of the water soluble dye with the vinyl monomers, rather than as a hydrophobic moiety (which can be converted after polymerization) as required by claim 6.” Relevant to dependent claim 25, Appellant argued that

Idogawa does not disclose a step of converting a hydrophobic moiety after formation of the particle. Finally, Appellant argued that claims 7 and 8 are dependant from claim 6 and are thus considered to be narrower in scope and that Winnik does not cure the apparent defects of the Idogawa rejections of claim 6. Since Idogawa and Winnik do not teach each and every element of claim 6, they certainly do not teach each and every element of claims 7 and 8.

The Appellant did not amend the claims when filing the RCE because it was the Appellants' position that the Examiner had not shown each and every element of the claimed invention, nor was there any suggestion to modify the cited reference to arrive at the claimed invention. Specifically, the Examiner had not shown the use of a convertible moiety in its hydrophobic form, and still has not shown this element of the claims in the cited prior art. Because the Appellants' did not amend the claims when filing the RCE, the third Office Action that was issued was also made final (September 9, 2005). After receiving two consecutive Final Office Action rejections, Appellant decided it would be beneficial to appeal the present claims so that a neutral third party could decide these issues.

In the 2<sup>nd</sup> Final Office Action, the Examiner rejected all pending claims for the reasons given in the Office Action mailed on March 2, 2005. The Examiner stated that "[t]he word hydrophilic and hydrophobic used by applicant and patentees appear to be a matter of semantics." The Appellants continue to disagree with this assertion, in that the moieties at issue are, in fact, convertible, and thus, it depends on their state as to whether they are hydrophilic or hydrophobic. Appellant filed a Notice of Appeal on December 9, 2005.

The shortcomings of the rejections will now be reviewed. Arguments and statements by Appellant made earlier but not repeated here are also part of the record for this appeal and are not

waived; although they may be modified or supplemented herein. To keep this brief short while still trying to provide an adequate basis for review, some observations and arguments that might have been presented are not included. Accordingly, Appellants' silence herein with respect to particular statements by the United States Patent and Trademark Office does not indicate their agreement with or acquiescence thereto.

B. Appellants' Invention

As evidenced by the art of record, various methods of emulsion polymerization used to create amphipathic polymer particles are known. What Appellants have invented, and set forth in the claims, is a method of using compounds with convertible monomers to create amphipathic polymer particles under conditions where the convertible monomers are admixed as hydrophobic monomers. The convertible monomers can subsequently be converted to hydrophilic monomers (claim 24) by increasing the pH of the mixture, after the particles are formed. Again, it is important to note that the convertible monomers must be admixed in hydrophobic form so that they will more effectively stay in the hydrophobic phase of the emulsion prior to and during polymerization. Admixing the convertible monomers in their hydrophobic form increases the efficiency of the polymerization reaction with the hydrophobic monomers, as such hydrophobic monomers are less likely to leach out into the aqueous phase before or during emulsion polymerization. Further, convertible moieties in hydrophobic form tend to mix better with other hydrophobic monomers. As a result, the mixture of hydrophobic convertible moieties with other hydrophobic groups is more efficient because more of the convertible moiety stays in the hydrophobic phase of the emulsion. Thus, improved particulate dispersions are formed.

To Appellants' knowledge, they were the first to make amphipathic polymer particles by

combining convertible monomers in their hydrophobic state with other hydrophobic monomers in an emulsion polymerization. Further, regarding claim 24, the subsequent step of converting the convertible moieties to hydrophilic form after forming the solid particles provides improved polymeric particulate dispersions over the prior art as well. For example, once the particles are formed, the convertible groups can be safely converted without causing problems associated with leaching of the hydrophilic groups out into solution (because they are attached as part of the solid particle at this point in time).

C. Asserted References

1. The Idogawa Reference

Idogawa teaches a method of preparing a colored resin fine dispersion liquid for a water based ink that could be used with a writing tool or in an ink jet printer. See column 1, lines 53-67 and column 2, lines 1-6. According to Idogawa, a hydrophilic monomer alone, including vinyl monomers having an acid functional group such as 2-methacryloyloxyethyl succinate, “cannot be emulsion-polymerized in many cases, and the vinyl monomer mixed with a hydrophobic vinyl monomer is preferably emulsion-polymerized.” See column 4, lines 7-11. Thus, Idogawa must contemplate using the hydrophilic form of convertible monomers utilized by the present invention. Idogawa also explains that the vinyl monomer with an acid functional group (the “hydrophilic” monomer) “improves very much the admixture of the water soluble basic dye with the mixed vinyl monomer, and as a result thereof, the deeply colored resin fine particles can be obtained.” See column 4, lines 23-27. The hydrophilic properties of these monomers are portrayed as highly desirable in the Idogawa patent because of their ability to act as a bridge between the hydrophilic water soluble basic dye and the hydrophobic mixed vinyl

monomer (which is hydrophobic). In other words, there appears to be no recognition that one of the hydrophilic components listed may include a convertible moiety. Additionally, there is no teaching or suggestion of converting this “hydrophilic” component to hydrophobic form. In fact, it is important to the teachings of Idogawa that this component be in hydrophilic form so that it can function as described in the Idogawa specification, i.e. to improve the admixture of the water soluble basic dye with the mixed vinyl monomer.

## 2. The Winnik Reference

Winnik teaches a method of preparing colored toner compositions by dispersion polymerization. See column 1, lines 8-10. The process includes dispersion polymerization methods where a monomer has a dye moiety permanently attached. See column 3, lines 47-53. Winnik’s method involves combining selected monomers in an appropriate solvent, adding a polymerization initiator, and then heating the mixture to affect polymerization. See column 4, lines 18-32. Winnik does describe using two sets of monomer components. See column 4, lines 18-25. However, the suggested monomers do not include any of the convertible monomers described in the specification of the instant invention. Winnik does not teach or suggest a process using emulsion polymerization with a surfactant, the production of amphipathic polymer particles, or using convertible hydrophobic monomers.

## D. Rejections Under 35 U.S.C. § 102(b) over Idogawa

The Idogawa patent does not contain each and every element of the invention claimed. Specifically, the Idogawa patent does not admix convertible moieties in their hydrophobic form to create the desired amphipathic polymer particles as required by claims 6, 9, and 10. “A claim is anticipated only if each and every element as set forth in the claims is found, either expressly

or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil of California, 814 F.2d 628, 631 2 U.S.P.Q. 2d 1051 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the . . . claim.” Richardson v. Suzuki Motor Co., 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). When a reference is silent about an inherent characteristic, “such gap in the reference may be filled with recourse to extrinsic evidence.” Continental Can Company USA, Inc. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). “Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” Id. (emphasis added).

Claim 6 (the independent claim) requires that a convertible moiety be admixed in its hydrophobic form in an emulsion polymerization. The convertible moiety is called “convertible” because it is capable of existing in either hydrophilic or hydrophobic form. Contrary to the Examiner’s contention that “[t]he word hydrophilic and hydrophobic used by applicant and patentees appear to be a matter of semantics,” there is a distinct difference in properties exhibited by convertible moieties at different pH levels. At more acidic pH levels, the convertible moieties tend to exhibit hydrophobic properties. At more basic pH levels, the convertible moieties tend to exhibit hydrophilic properties.

The Examiner contends that Idogawa discloses the same method of making amphipathic polymer particles using a convertible moiety as is described by claims 6, 9, and 10. However, Idogawa clearly teaches the use of a convertible moiety in its hydrophilic form. Because Idogawa proclaims the benefits of using a hydrophilic moiety in the emulsion polymerization process, Idogawa lacks the express requirement of using a convertible moiety in its hydrophobic

form. Moreover, Idogawa explains that the hydrophilic properties of the moiety improve mixing of the dye and the hydrophobic moiety. This can be analogized as acting like a bridge between the hydrophilic components and the hydrophobic components. Thus, the condition that the convertible moiety be admixed in hydrophobic form is not present in Idogawa, as required by Continental Can v. Monsanto. Accordingly, the Idogawa patent does not anticipate claims 6, 9, and 10 because it does not describe, either expressly or inherently, each and every element as set forth in the aforementioned claims.

E. Rejections Under 35 U.S.C. § 103(a) over Idogawa in view of Winnik, or alternatively, over Idogawa alone

The Examiner has rejected claims 7, and 8 on appeal as being prima facie obvious over Idogawa in view of Winnik under 35 U.S.C. § 103(a) and claim 24 on appeal as being prima facie obvious over Idogawa under 35 U.S.C. § 103(a). The PTO, through the Examiner, has the burden of establishing prima facie obviousness. Appellant contends that the Examiner has not met its burden of establishing a prima facie case of obviousness for at least three reasons. First, neither Idogawa nor Idogawa in view of Winnik teach or suggest each claimed limitation of the instant invention. Second, both the Idogawa and Winnik patents teach away from the claimed invention. Third, modifying Idogawa to arrive at the claimed invention would destroy the function of Idogawa. Therefore, the Examiner has not met the burden of establishing a prima facie case of obviousness.

1. Requirements for Prima Facie Obviousness

The issue under § 103 is whether the PTO has stated a case of prima facie obviousness. “The PTO has the burden under § 103 to establish a prima facie case of obviousness.” In re Fine,

837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). To satisfy this burden, the PTO must meet the criteria set out in M.P.E.P § 706.02(j):

[T]hree basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Moreover, the obviousness analysis must comply with the statutory scheme as explained by the Supreme Court in Graham v. John Deere Co., 383 U.S. 1, 17 (1966), namely, consideration must be given to: (1) the scope and content of the prior art, (2) the differences between the prior art and the claimed invention, (3) the level of ordinary skill in the pertinent art, and (4) additional evidence, which may serve as indicia of non-obviousness.

In In re Dow Chemical Co., 5 U.S.P.Q.2d 1529, (Fed. Cir. 1988), the court states that both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure.

The Federal Circuit stated in In re Carroll, 202 U.S.P.Q. 571, 572 (Fed. Cir. 1979):

One of the more difficult aspects of resolving questions of non-obviousness is the necessity to guard against slipping into use of hindsight (citing Graham v. Deere). Many inventions may seem obvious to everyone after they have been made. [citation omitted] Thus, in deciding the issue of obviousness, we must look at the prior art presented from a vantage point in time prior to when the invention was made, and through the eyes of a hypothetical person of ordinary skill in the art.

With the above background in mind, Appellants contend that the Patent Office has failed to meet its burden of making a prima facie case of obviousness. Particularly, Appellants submit that the Patent Office has failed to show that each and every element of the claimed invention is

contained in the combined references, that there was sufficient motivation to modify the asserted prior art references, and that the references provide a reasonable expectation of success. Thus, any motivation to modify the references to practice the claimed invention is based on impermissible hindsight.

2. Non-obviousness (Idogawa in view of Winnik)

a) Failure to Teach or Suggest All the Claim Limitations

Even if the asserted references were combined as suggested by the PTO, the resultant combination would still fall short of yielding the claimed invention. According to M.P.E.P § 706.02(j), the asserted prior art reference (or references when combined) must teach or suggest all the claim limitations. See also In re Royka, 490 F.2d 981, 985 180 U.S.P.Q. 580, (CCPA 1974) (reversing an obviousness rejection because the essence of the claimed invention was not present in the asserted references). Idogawa and Winnik do not teach or suggest using a convertible moiety in hydrophobic form as required by claim 6. Since independent claim 6 is nonobvious under 35 U.S.C. § 103, claims 7 and 8, which depend therefrom, are also nonobvious. In re Fine, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988).

All words in a claim may provide limitations and must be considered against the prior art. In In re Wilson, 57 C.C.P.A. 1029, 1033 (CCPA 1971), the board rejected a claim for a “two-phase composition of incompatible resins” as obvious over other two-phase compositions of resins. The board did not give meaning to the term ‘incompatible.’ Id. The CCPA held that the term ‘incompatible’ was sufficiently defined in the specification and that ignoring the term rendered the board’s conclusion of obviousness unsupported. Id. at 1033. The court explained that “[a]ll words in a claim must be considered in judging the patentability of that claim against

the prior art.” Id. at 1032.

Similarly, in the instant case, the Examiner refused to give meaning to the term ‘hydrophobic.’ The Examiner stated “[t]he word hydrophilic and hydrophobic used by applicant and patentees appear to be a matter of semantics.” Even though Idogawa explains the benefits of using an unsaturated monomer with a hydrophilic moiety without describing or recognizing a hydrophobic form, the Examiner stated that Idogawa “discloses and exemplifies” the same monomer used by Appellant “containing a convertible moiety in hydrophobic form.” Additionally, Winnik does not solve this deficiency because it does not teach the use of convertible monomers or convertible monomers in their hydrophobic form as required by claim 6 and described in the specification of the instant invention. The Examiner failed to appreciate the recognized properties of convertible monomers, which can contain a moiety in either hydrophilic or hydrophobic form. For that reason, the Examiner failed to consider the limitation in claim 6 requiring the use of convertible moieties in hydrophobic form rather than in hydrophilic form. Accordingly, the Examiner’s conclusion of nonobviousness is unsupported by the prior art.

b) Teaching Away

The Examiner’s primary and secondary references teach away from the present invention. “A prima facie case of obviousness can be rebutted if the applicant . . . can show ‘that the art in any material respect taught away’ from the claimed invention.” In re Geisler, 116 F. 3d 1465, 1469, 43 U.S.P.Q. 2d 1362, 1365 (Fed. Cir. 1997) (quoting In re Malagari, 499 F.2d 1297, 1303, 182 U.S.P.Q. 549, 533 (CCPA 1974). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, . . . would be led in a direction divergent from the path that was taken by the applicant.” Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1360,

52 U.S.P.Q.2d 1294, 1298 (Fed. Cir. 1999).

The convertible monomer in hydrophobic form would not achieve the function suggested by Idogawa of improving the admixture of the water-soluble basic dye with the mixed vinyl monomer. In the instant invention, it is important that the convertible monomers be admixed in hydrophobic form so that they will stay in the hydrophobic phase of the emulsion, efficiently forming heteropolymers with the hydrophobic monomers. Idogawa uses more hydrophilic monomers as a bridge between the hydrophilic and hydrophobic phase of the emulsion. Because of this, we must presume that the convertible monomers have some hydrophilic properties, allowing them to interact with the hydrophilic phase of the emulsion. Conversely, the instant invention uses the convertible monomers in hydrophobic form because they allow for minimal interaction with the hydrophilic phase of the emulsion. Thus, the purpose of the convertible monomers as used in the Idogawa reference teaches away from the purpose of the convertible monomers as used in the instant invention.

c) Destroying the Function

The same facts set forth above in section VII/E/2/b above also provides a basis for a finding that utilizing the monomers set forth in Idogawa that might be convertible in their hydrophobic form would destroy the function of the teachings of Idogawa. If the purpose of the use of the hydrophilic compounds taught in Idogawa is to improve the mixing between hydrophilic dyes and hydrophobic monomers, then the step of “converting” some of these monomers that are convertible to hydrophobic form, as claimed in claim 24, would cause this function to cease. Thus, to make the modification suggested by the Examiner, Idogawa would cease to function as set forth in its specification.

For at least these reasons, Appellants contend that the Examiner has failed to establish a prima facie case of obviousness, and submit that the rejection is improper and should be reversed.

3. Non-obviousness (Idogawa)

The arguments presented in sections VII/E/2/a-c above apply to this rejection as well, and are incorporated herein by reference. In addition, Idogawa does not teach or suggest the claimed limitation of affirmatively converting the convertible hydrophobic moiety into a hydrophilic form after the polymeric particulate is formed as claimed in claim 24 of the instant invention. The Examiner alleges that although Idogawa does not specifically disclose the step of converting the hydrophobic moiety into a hydrophilic form, Idogawa does suggest the use of pH controllers, if necessary. The Examiner further states that the change in pH is the method used by the Applicant to provide such a conversion, and that it would have been obvious to those skilled in the art that the addition of such pH controllers would result in converting the hydrophobic moiety into a hydrophilic moiety.

Appellant recognizes the obviousness of using pH controllers to alter the pH of solutions. Even though Idogawa suggests using pH controllers, they are disclosed in the reference for optional use and included in a list of other optional ingredients, such as preservatives and defoaming agents. The Examiner contends that using any of the basic pH controllers as taught will inherently result in the step of converting the convertible moiety to a hydrophilic form after polymer particle formation. However, this “inherent” step would be impossible because Idogawa does not utilize a convertible moiety in its hydrophobic form in the first place. Idogawa clearly does not contemplate a conversion step because after the emulsion polymerization process is

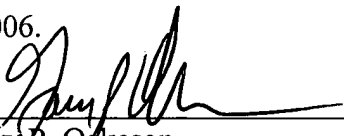
complete, it would already be “amphipathic.” (This being stated, the product would likely be inferior to a product produced by the claimed process for the reasons previously set forth). Since Idogawa copolymerizes a hydrophobic monomer with a vinyl monomer having acid functional groups (the convertible monomer), any conversion by pH adjustment would be from hydrophilic to hydrophobic, which does not read on the presently claimed invention. Converting the hydrophilic moieties to hydrophobic moieties would also frustrate the goal of Idogawa, which is to make amphipathic particles having an increased shelf life. Further, there is no suggestion of using the pH controllers set forth in Idogawa as a step after formation of dispersed particles. It merely makes a general statement that pH controllers can be used. This does not suggest the very specific teaching of converting hydrophobic moieties to hydrophilic moieties after formation of the polymeric particles.

### VIII. CONCLUSION

In conclusion, Appellants respectfully submit that the claims on appeal set forth in the appendix are patentably distinct from the asserted prior art references. Particularly, none of the asserted references, or the combination thereof, motivates, teaches, or suggests with the requisite specificity to one of ordinary skill in the art, within the meaning of 35 U.S.C. §§ 102 and/or 103, to arrive at the presently claimed invention. Appellants contend neither Idogawa nor Idogawa and Winnik teach or suggest each and every element of the claimed invention. Moreover, Idogawa teaches away from the claimed invention, and any modification that would cause one skilled in the art to arrive at the claimed invention would destroy the function of Idogawa.

Since the Patent Office has not met its initial burden of establishing that the claims lack novelty or that the claims are prima facie obvious, Appellants respectfully submit that all remaining rejections are improper, and should be overturned.

Dated this 9<sup>th</sup> day of February, 2006.

  
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## IX. CLAIMS APPENDIX

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Previously Presented) A method of preparing amphipathic polymer particles

comprising the steps of:

admixing an aqueous carrier, an unsaturated monomer containing a hydrophobic moiety, an unsaturated monomer containing a convertible moiety in hydrophobic form, and a surfactant to form an emulsion;

initiating a polymerization by adding a catalyst to the emulsion,

continuing polymerization at a temperature and for a period of time sufficient to form amphipathic polymer particles,

wherein the amphipathic polymer particles have a size range of 50-500 nm.

7. (Previously Presented) The method of claim 6, further comprising the step of filtering the reaction mixture through a filter.

8. (Previously Presented) The method of claim 6, wherein the emulsion further contains a polymerizable dye monomer.

9. (Previously Presented) The method of claim 6, wherein the emulsion further contains  
a  
cross linker.

10. (Previously Presented) The amphipathic polymer particles produced by the method of claim 6.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The method of claim 6, further comprising the step of converting the convertible moiety to a hydrophilic form after the amphipathic polymer particles are formed.

X. EVIDENCE APPENDIX

(No matter presented)

XI. RELATED PROCEEDINGS APPENDIX

(No matter presented)